

## Itchy skin - atopic dermatitis in dogs

Dogs can have itchy skin for a number of reasons. They may have an allergic reaction to flea, mite or mange infestations, bacterial or yeast infections - all of which are relatively easy for you and your vet to resolve. Vets treating an itchy dog will first of all eliminate these relatively simple causes and if no improvement is seen they will then suspect an allergy or reaction to certain foodstuffs or to environmental factors such as house dust or pollens. The allergy that results from breathing in pollen, dust, or mould is known as atopy (which literally means "strange disease") or atopic dermatitis and this immune related condition is often difficult and costly to treat.

Any pedigree or non-pedigree dog can be affected but research carried out by the University of Edinburgh suggests that English Setters are one of many breeds that are particularly susceptible to this condition.

Signs of atopic skin disease in English Setters usually appear between the ages of 6 – 18 months but can occur at any age. It generally begins with itchy feet and then progresses to the tummy/groin area, under the tail and on the face, around the lips. An affected dog will be constantly scratching, biting or rubbing itself in an attempt to relieve the itch, often to such an extent that fur is removed leaving the affected area inflamed, sore, and sometimes even bleeding. Many dogs suffer all year round as one of the most common allergens is the ever-present house dust mite, but increasing numbers of Setters appear to suffer more at certain times of the year, particularly in spring and summer which would indicate an allergy to tree, flower and grass pollens. Others seem to react more to certain types of food and occasionally bitches are worse (or sometimes better) during their season, which could indicate a hormonal influence. In many cases recurrent ear infections accompany atopic dermatitis.

Dogs suffering from atopic dermatitis can have symptoms ranging from occasional slight itchiness to such a debilitating state that some owners consider euthanasia.

This is a condition that is only curable if non exposure to the allergen that is causing the problem is achievable on a permanent basis – otherwise it is a case of careful management to alleviate the itch for the rest of the dog's life.



Flea control is essential as a first step – flea bite allergy is one of the commonest allergies seen in dogs. Most vets will then carry out skin scrapes examining them under the microscope to check for bacterial and yeast infections which are easily treated with antibiotics and specialised shampoos.

If your dog is still itching after these common causes have been treated and eliminated then your vet may suspect that the problem is caused by a food intolerance. There are blood tests available to assist diagnosis, but these are not always reliable and many vets have little faith in them. The only way to identify a true sensitivity to certain foods is to run a food trial. Theoretically, if a certain foodstuff is identified as causing the problem, then removing it from the diet should completely resolve the problem and stop the itching.

Unfortunately, this is rarely the case as atopic animals appear to react to several allergens at a time - one may be food and another pollen for example.

Food trials can be difficult to carry out as those yielding the best results are usually home-prepared menus as then you know exactly what your dog is eating. It involves preparing a special diet daily based on a single protein and carbohydrate source that the dog has not had before – such as rabbit and boiled potato. This needs to be rigorously continued for at least 6 weeks to see if there is any improvement. During this time, that is all the dog should eat – no treats, chews or table scraps. Just one treat containing what they are sensitive to can have them continuing to itch for several weeks.

There are many commercial “hypoallergenic” brands readily available at supermarkets that may help but pet food manufacturers can vary the composition over time due to food prices and availability and all of the kibble

products contain preservatives which may also be causing an allergic reaction. It is important to remember that it is the ingredients in the diet that the dog reacts to: beef, wheat, maize, etc. and not the brand of food. The same rules apply – no treats or extras that contain anything other than the ingredients in the kibble.

Another option, probably the easiest but most expensive, is to use a food that has been chemically treated (hydrolysed) so that the protein molecules are broken down to be too small to cause an adverse reaction. These specialised brands are available dried or in cans and usually purchased through your veterinary practice.

In all cases, the trial food should be given for at least six weeks unless the itching stops completely before then. If the itch does go away, then the dog should be given his old diet for a day or two to see whether the scratching returns, thus confirming that it is something in his food causing the problem. If you are lucky and this does turn out to be the case, all you will then need to do is continue feeding meals and treats that do not contain the ingredients that triggers the itching.

If there is still no noticeable improvement, your vet will strongly suspect atopic dermatitis and to help in the diagnosis they may use the following criteria:

***The Favrot criteria (adapted) for diagnosing canine atopic dermatitis***

*(Favrot C, Steffan J, Seewald W & Picco 2010 A prospective study on the clinical features of chronic canine atopic dermatitis and its diagnosis. Veterinary Dermatology 21 23-31)*

- *Onset of signs under three years of age*
- *Dogs mostly living indoors*
- *Steroid-responsive itchiness (common steroids used in dogs include prednisolone and medrone) i.e. the itch goes away when the dog is on steroid*
- *medication*
- *Itchiness without skin lesions at the beginning of the problem*
- *Front feet are affected*
- *Pinnae (ear flaps) are affected*
- *The ear margins are not affected*
- *The back is not affected*

The next diagnostic tool your vet may suggest will be intradermal or blood testing for environmental allergens. This will help pinpoint the specific

allergen that is causing the itching including inhaled allergens and also some contact allergies.

During intradermal skin testing, an area of fur is shaved from the dogs side to expose the skin. Minute amounts of suspected allergens are then injected just below the skin's surface in a specific order and pattern so that if the dog does show a small raised reaction at one of the injection sites it is easy to identify the offending antigen. The testing site is carefully examined an hour or two later to confirm which, if any, allergen has created a skin reaction.

The other option is blood-testing. The blood sample is sent to a specialised lab where it is screened for a reaction to a broad range of allergens including pollens, dust and moulds that are common to the geographical area in which the dog lives.

Whether the screening was intradermal or by blood-sampling, the follow up treatment is very similar. Once the allergens for that dog have been identified the dog can receive a tailor-made course of immunotherapy/hyposensitization injections containing very small quantities of these allergens . These injections will be given over a period of weeks to months until the dog develops immunity to the agents. After the initial course, boosters are usually required for the rest of the dog's life – these are made up to same specific formula by the lab that did the original testing. As you can imagine, this is quite a costly procedure and often only helps to alleviate the itch and does not remove it altogether as there is a limit to the number of allergens that can be tested, and there is no way of being sure exactly what that your dog is susceptible to. Most atopic dogs react to several allergens.

These tests tend to work best if carried out during the season when the dog's allergies are at their worst as this gives an indication to the lab what allergens may be causing the problem - for example certain tree or grass pollens are only around during specific months of the year. Generally animals to be tested must not have been treated with steroids or antihistamines for several weeks before testing otherwise the test results may be affected -this makes it a difficult time for both dog and owner.

Many owners decide not to try the immunotherapy option – there is choice of drugs your vet may use to alleviate the symptoms.

**Steroids** – this is the cheapest option and usually works well but its use is limited by side effects. Generally, they are considered safe for long term use if given as prednisolone or methylprednisolone tablets every other day or less frequently. A better option is the hydrocortisone aceponate skin spray – “Cortavance” as this does not enter the body in an active form. If the itchiness

is very bad, unfortunately it is often not possible to control the condition with a level of steroid treatment that avoids side effects.

**Atopica** - this is a brand name for cyclosporine , a powerful drug that was originally developed to stop rejection in people who had undergone organ transplants by suppressing the immune system. It is usually effective but there are still little data on possible side-effects in animals taking the drug for long periods. Often it takes a few weeks for the dog to get used to the medication and can cause vomiting but this does usually settle. It is an expensive drug, given daily at least for the first 30 days to ensure the skin condition is under control, but it has the advantage that after this initial period the frequency of dosage can be gradually reduced with many Setters managing very well on one tablet twice a week.

**Apoquel** - this is a new drug and a new type of agent. It appears to have very few side effects and is reported to be immediately effective. As with Atopica, it is a prescription only drug, and its use needs to be monitored by your vet. Again it is quite expensive and needs a daily dose and at present is in very short supply so few vets are able to prescribe it, but this should be rectified soon.

It is worth noting that mild cases of itchy skin can often be kept in check by careful home management. Try to avoid any known allergens - this may include avoiding forests or country walks at certain times of the year. Many owners have found that wet, muddy conditions aggravate the problem and so careful washing and drying after walks helps to alleviate the symptoms as well as washing potential allergens from the skin.

Sometimes use of antihistamines may help and specialised shampoos to prevent secondary bacterial or yeast infections keep the skin clean and hydrated.

English Setters often do not tolerate maize very well so choose a diet that is maize-free. Supplements such as Evening Primrose or omega fish oils (essential fatty acids) given daily are strongly recommended and some itchy dogs respond well to homeopathic remedies.

Many of the above suggestions can also be used for dogs that are on steroids, *Atopica* or *Apoquel* ( check with your vet) – they may help alleviate the problem at least a little and result in you being able to control the itchiness on a lower drug dosage.

Atopic dogs should not be bred from.